

WHAT IS CLAIMED IS:

1. A fulfillment system associated with a distributed supply chain, comprising:

a database operable to store:

5 at least one rule identifying a sourcing constraint associated with a customer; and

at least one contract value associated with a current status of a contract involving the customer; and

one or more processors collectively operable to:

10 receive an available-to-promise (ATP) request comprising a plurality of request line-items each corresponding to a desired product;

generate one or more component ATP requests using at least one rule in the database and based on the request line-items;

15 communicate the component ATP requests to at least one supplier associated with the desired product, the supplier determined according to at least one rule identifying the sourcing constraint;

20 receive a plurality of component quotations from at least one supplier, each component quotation corresponding to a component ATP request and comprising product availability information for one or more corresponding desired products; and

generate a quotation for communication using the product availability information and the contract value in the database.

2. The fulfillment system of Claim 1, wherein the one or more processors  
25 are further collectively operable to:

update the current status of the contract using previous orders placed under the contract; and

generate an updated contract value using the updated current status of the contract.

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3. The fulfillment system of Claim 1, wherein the one or more processors are further collectively operable to:

receive one or more attribute values from the customer, the attribute values associated with one or more attributes of the desired product;

5       search a product catalog for one or more products having matching attribute values; and

retrieve product information associated with at least one matching product from the catalog.

10           4.       The fulfillment system of Claim 1, wherein:

at least one rule identifies one or more preferred suppliers associated with the customer; and

the one or more processors are collectively operable to:

communicate the component ATP requests to the preferred suppliers;

15 determine if the preferred suppliers are able to supply a requested  
quantity of the desired product based on the component quotations; and

communicate component ATP requests to additional suppliers if the preferred suppliers are unable to supply the requested quantity of the desired product.

20            5.        The fulfillment system of Claim 1, wherein:

the database is further operable to store at least one second rule associated with one of the suppliers;

at least one second rule identifies a validity period for component quotations supplied by the supplier; and

25           the one or more processors are collectively operable to generate the component ATP requests and the quotation using the rule associated with the customer and the second rule associated with the supplier.

6. The fulfillment system of Claim 1, wherein:  
the database is operable to store a plurality of rules; and  
the one or more processors are further collectively operable to select one or  
more of the rules for generating the component ATP requests based on contents of the  
5 ATP request.

7. The fulfillment system of Claim 1, wherein the one or more processors  
are further collectively operable to:  
identify a plurality of available optional components associated with the  
10 desired product;  
identify valid combinations of the optional components; and  
display the valid combinations of the optional components to the customer.

8. The fulfillment system of Claim 1, wherein the one or more processors  
15 are further collectively operable to generate a sourcing plan using the product  
availability information and at least one rule, the sourcing plan identifying one or  
more suppliers and a quantity of the desired product reserved from each identified  
supplier.

9. The fulfillment system of Claim 8, wherein the one or more processors  
20 are further collectively operable to iteratively generate a sourcing plan when a  
previous sourcing plan fails to satisfy the corresponding rules in the database.

10. The fulfillment system of Claim 1, wherein the contract value  
25 comprises a discount available to the customer from one or more of the suppliers.

11. The fulfillment system of Claim 1, wherein:  
the database is further operable to store at least one second rule associated  
with a logistics provider; and  
30 the second rule identifies one or more delivery services provided by the  
logistics provider and available to the customer.

12. The fulfillment system of Claim 1, wherein:
- the fulfillment system operates in an electronic marketplace;
- the one or more processors are collectively operable to receive at least one ATP request through a web-based user interface using Hypertext Transfer Protocol (HTTP); and
- the one or more processors are collectively operable to communicate the quotation using electronic mail.

13. The fulfillment system of Claim 1, wherein the one or more processors are collectively operable to receive at least one ATP request using at least one of Hypertext Transfer Protocol (HTTP), Simple Network Management Protocol (SNMP), Extensible Markup Languages (XML), Electronic Data Interchange (EDI) Value Added Network (VAN), and electronic mail.

14. A computer-implemented method for fulfillment in a distributed supply chain environment, comprising:

receiving an available-to-promise (ATP) request comprising a plurality of request line-items each corresponding to a desired product;

5 generating one or more component ATP requests using at least one rule and based on the request line-items, at least one of the rules identifying a sourcing constraint associated with a customer;

communicating the component ATP requests to at least one supplier associated with the desired product, the supplier determined according to at least one  
10 rule identifying the sourcing constraint;

receiving a plurality of component quotations from at least one supplier, each component quotation corresponding to a component ATP request and comprising product availability information for one or more corresponding desired products; and

generating a quotation for communication using the product availability  
15 information and at least one contract value associated with a current status of a contract involving the customer.

15. The method of Claim 14, further comprising:

updating the current status of the contract using previous orders placed under  
20 the contract; and

generating an updated contract value using the updated current status of the contract.

16. The method of Claim 14, further comprising:

25 receiving one or more attribute values from the customer, the attribute values associated with one or more attributes of the desired product;

searching a product catalog for one or more products having matching attribute values; and

retrieving product information associated with at least one matching product  
30 from the catalog.

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17. The method of Claim 14, wherein at least one rule specifies that:  
the component ATP requests should be initially communicated to one or more  
preferred suppliers; and

5 additional component ATP requests should be communicated to additional  
suppliers if the preferred suppliers are unable to supply a requested quantity of the  
desired product.

18. The method of Claim 14, wherein:  
at least one of the rules is associated with one of the suppliers and identifies a  
10 validity period for component quotations supplied by the supplier; and  
generating the component ATP requests and generating the quotation  
comprise generating the component ATP requests and the quotation using the rule  
associated with the customer and the rule associated with the supplier.

15 19. The method of Claim 14, further comprising selecting one or more of  
the rules for generating the component ATP requests based on contents of the ATP  
request.

20 20. The method of Claim 14, further comprising:  
identifying a plurality of available optional components associated with the  
desired product;  
identifying valid combinations of the optional components; and  
displaying the valid combinations of the optional components to the customer.

25 21. The method of Claim 14, further comprising generating a sourcing  
plan using the product availability information and at least one rule, the sourcing plan  
identifying one or more suppliers and a quantity of the desired product reserved from  
each identified supplier.

30 22. The method of Claim 21, further comprising generating a sourcing  
plan when a previous sourcing plan fails to satisfy the corresponding rules.

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23. The method of Claim 14, wherein the contract value comprises a discount available to the customer from one or more of the suppliers.

24. The method of Claim 14, wherein at least one rule is associated with a logistics provider and identifies one or more delivery services provided by the logistics provider and available to the customer.

25. The method of Claim 14, wherein receiving at least one ATP request comprises receiving at least one ATP request through a web-based user interface using Hypertext Transfer Protocol (HTTP); and  
further comprising communicating the quotation to the customer using electronic mail.

26. The method of Claim 14, wherein receiving at least one ATP request comprises receiving one or more ATP requests using at least one of Hypertext Transfer Protocol (HTTP), Simple Network Management Protocol (SNMP), Extensible Markup Languages (XML), Electronic Data Interchange (EDI) Value Added Network (VAN), and electronic mail.

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27. Software for fulfillment in a distributed supply chain environment, the software embodied in at least one computer-readable medium and when executed by one or more processors operable to:

5 receive an available-to-promise (ATP) request comprising a plurality of request line-items each corresponding to a desired product;

generate one or more component ATP requests using at least one rule and based on the request line-items, at least one of the rules identifying a sourcing constraint associated with a customer;

10 communicate the component ATP requests to at least one supplier associated with the desired product, the supplier determined according to at least one rule identifying the sourcing constraint;

receive a plurality of component quotations from at least one supplier, each component quotation corresponding to a component ATP request and comprising product availability information for one or more corresponding desired products; and

15 generate a quotation for communication using the product availability information and at least one contract value associated with a current status of a contract involving the customer.

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28. A fulfillment system associated with a distributed supply chain, comprising:

means for storing at least one rule identifying a sourcing constraint associated with a customer and at least one contract value associated with a current status of a contract involving the customer;

means for receiving an available-to-promise (ATP) request comprising a plurality of request line-items each corresponding to a desired product;

means for generating one or more component ATP requests using at least one rule and based on the request line-items;

means for communicating the component ATP requests to at least one supplier associated with the desired product, the supplier determined according to at least one rule identifying the sourcing constraint;

means for receiving a plurality of component quotations from at least one supplier, each component quotation corresponding to a component ATP request and comprising product availability information for one or more corresponding desired products; and

means for generating a quotation for communication using the product availability information and the contract value.

29. A fulfillment system associated with a distributed supply chain, comprising:

a database operable to store:

at least one first rule identifying a sourcing constraint associated with a customer, at least one of the first rules identifying one or more preferred suppliers associated with the customer; and

at least one second rule identifying a sourcing constraint associated with a supplier; and

one or more processors collectively operable to:

generate a contract value associated with a current status of a contract involving the customer;

receive an available-to-promise (ATP) request comprising a plurality of request line-items each corresponding to a desired product;

select one or more of the rules based on contents of the ATP request;

generate one or more component ATP requests using at least one of the selected rules and based on the request line-items;

communicate the component ATP requests to at least one supplier associated with the desired product, the supplier determined according to at least one rule identifying one of the sourcing constraints;

receive a plurality of component quotations from at least one supplier, each component quotation corresponding to a component ATP request and comprising product availability information for one or more corresponding desired products;

generate a first sourcing plan using at least the product availability information and the contract value, the first sourcing plan identifying one or more suppliers and a quantity of the desired product reserved from each identified supplier;

determine if the first sourcing plan satisfies the corresponding rules in the database; and

iteratively generate at least one additional sourcing plan if the first sourcing plan fails to satisfy the corresponding rules in the database.